

1. Record Nr.	UNINA9910969167703321
Titolo	Computer aided methods in optimal design and operations // editors, I. D. L. Bogle, J. Zilinskas
Pubbl/distr/stampa	Singapore ; ; Hackensack, NJ, : World Scientific Publishing, c2006
ISBN	9786611373252 9781281373250 1281373257 9789812772954 9812772952
Edizione	[1st ed.]
Descrizione fisica	1 online resource (238 p.)
Collana	Series on computers and operations research ; ; v. 7
Altri autori (Persone)	Boglel. D. L (Ian David Lockhart) ZilinskasJ <1973-> (Julius)
Disciplina	620/.00420285
Soggetti	Computer-aided design Mathematical optimization Control theory Chemical engineering - Mathematical models
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Containing papers presented at the bilateral workshop by British and Lithuanian scientists, the book brings together researchers' contributions from different fields--chemical engineering including reaction and separation processes, food and biological production, as well as business cycle optimization, bankruptcy, protein analysis and bioinformatics"--P. [4] of cover.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Contents ; Preface ; Hybrid Methods for Optimisation ; 1. Introduction ; 2. Hybrid Methods for Optimisation ; 3. Embedded Hybrid Methods ; 4. Sequential Hybrid Methods ; 5. Illustrative Case Study ; 6. Discussion ; References ; An MILP Model for Multi-class Data Classification ; 1. Introduction 2. Problem Statement and Mathematical Formulation 3. Testing Procedure ; 4. An Iterative Solution Algorithm ; 5. Computational Results ; 6. Conclusions ; References ; Implementation

of Parallel Optimization Algorithms Using Generalized Branch and Bound Template

; 1. Introduction

2. General Branch and Bound Algorithm

3.

BB Algorithm Template

; 4. Conclusions

; References

; Application of Stochastic Approximation in

Technical Design

; 1.

Introduction

; 2. Formulation of the Optimization Problem

; 3. Computer Modelling

4. Application of Order Statistic to Optimality Testing

5. Computer Modelling

; 6. Conclusion

;

References

; Application of the Monte-Carlo Method to

Stochastic Linear Programming

; 1. Introduction

; 2. Stochastic Differentiation and

Monte-Carlo Estimators

3. Stochastic Procedure for Optimisation

4. Statistical Testing of the Optimality Hypothesis

; 5. Computer Study

; 6. Discussion and Conclusions

; References

; Studying the Rate of Convergence of the

Steepest Descent Optimisation Algorithm with Relaxation

; 1. Introduction

2. The General Quadratic Case

Sommario/riassunto

This book covers different topics on optimal design and operations with particular emphasis on chemical engineering applications. A wide range of optimization methods - deterministic, stochastic, global and hybrid - are considered. Containing papers presented at the bilateral workshop by British and Lithuanian scientists, the book brings together researchers' contributions from different fields - chemical engineering including reaction and separation processes, food and biological production, as well as business cycle optimization, bankruptcy, protein analysis and bioinformatics. <i>Sample
